

Overview of ITU-T Activities on Human Exposure to Electromagnetic Fields (EMFs)

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ITU/TSB

ITU: unique public/private partnership



- **UN agency** for ICTs
- **Members:**
 - **193 Member States**
(Governments and regulatory bodies)
 - **Over 700 Private Sector**
(Sector Members and Associates)
 - **Over 40 Academia**

Mr. Ban Ki-moon, Secretary-General of the United Nations
and Dr. H. Touré, Secretary-General of ITU

Committed to connecting the world



ITU-T Study Group 5

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Terms of Reference

Next meeting:

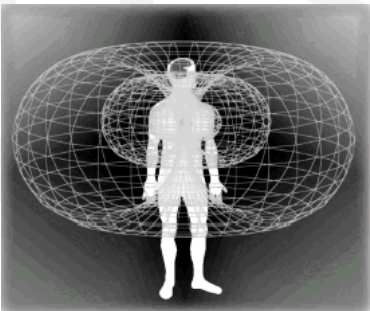
Lima, Peru, on
2-13 Dec 2013

Study Group 5 is responsible for studies:

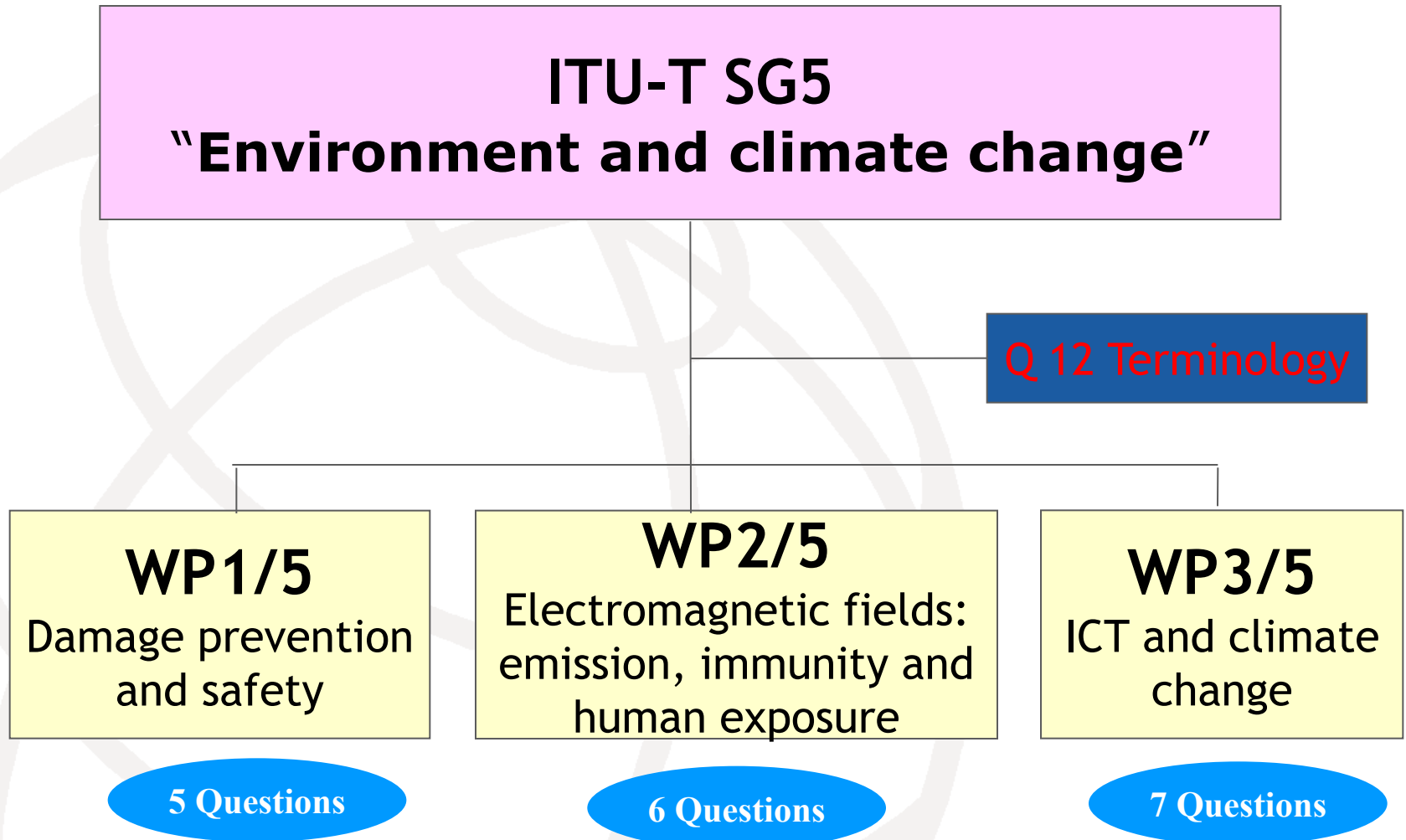
- on ICT environmental aspects of electromagnetic phenomena and climate change;
- related to electromagnetic compatibility (EMC), to safety and to health effects connected with electromagnetic fields produced by telecommunication installations and devices, including cellular phones.

Study Group 5 is lead SG for:

- Environment and climate change
- Electromagnetic compatibility and electromagnetic effects



Structure of ITU-T Study Group 5



Working Party 2/5

“Electromagnetic fields: emission, immunity and human exposure”

WP2/5 is responsible for studies relating to achieve EMC of telecommunication installations and safety of telecom personnel and population against electromagnetic fields.

Work areas:

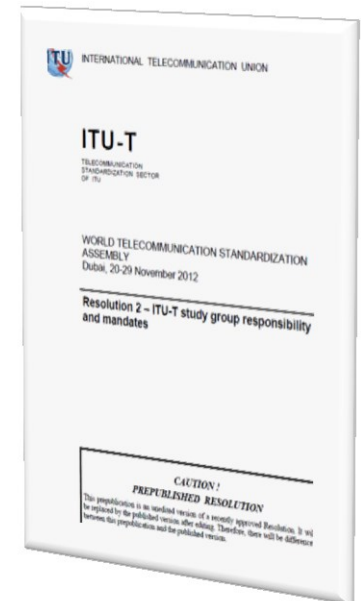
- **Q6/5** - EMC issues arising from the convergence of IT and communication equipment
- **Q7/5** - Human exposure to electromagnetic fields (EMFs) due to radio systems and mobile equipment
- **Q8/5** - EMC issues in home networks
- **Q9/5** - Generic and product family EMC recommendations for telecommunication equipment
- **Q10/5** - Security of telecommunication and information systems concerning the electromagnetic environment
- **Q11/5** - EMC requirements for the Information Society

ITU-T Resolution 72 on measurement concerns related to human exposure to electromagnetic fields

Revised and consented at World Telecommunication Standardization
Assembly (Dubai, 2012)

ITU-T Resolution 79 urges ITU to:

- expand and continue its work and support in this domain, including but not limited to:
 - disseminating information related to this topic through organizing workshops and seminars for regulators, operators and any interested stakeholders from developing countries;
 - continuing to cooperate and collaborate with other organizations working on this topic and to leverage their work, in particular with a view to assisting the developing countries in the establishment of standards and in monitoring compliance with these standards, especially on telecommunication terminals;



Question 7/5

Human exposure to electromagnetic fields (EMFs) due to radio systems and mobile equipment

Goals

To provide a high level framework for :

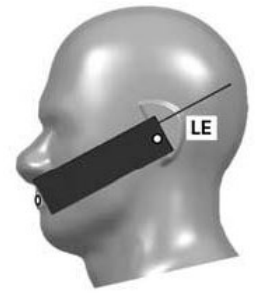
- Managing the human exposure to EMFs (regulatory practices).
- Guidelines for the assessment of human exposure exposure based on existing ITU-T Recommendations and standards produced by other standards development organizations (SDOs).

Ways

- Measuring techniques
- Procedures
- Numerical modeling for evaluating the electromagnetic field due to telecommunication systems and radio terminals.

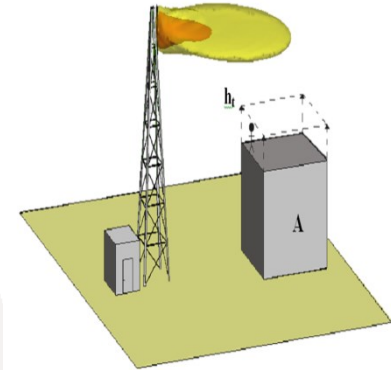


Question 7/5 (Cont'd)



Main Study Area:

- Real site measurements and modeling of the multiple sources operating on different frequencies and transmitting antennas;
- Determine the validity of electromagnetic field predictions;
- Procedures and guidance on numerical modeling of EMFs in the areas around telecommunication transmitting antennas and various systems;
- Guidance based on existing SAR measuring and calculating procedures, techniques and protocols for evaluating EMF due to ICT equipment;
- Handbook to answer frequently questions about human exposure to EMF.



Question 7/5 (Cont'd)

Main Tasks:

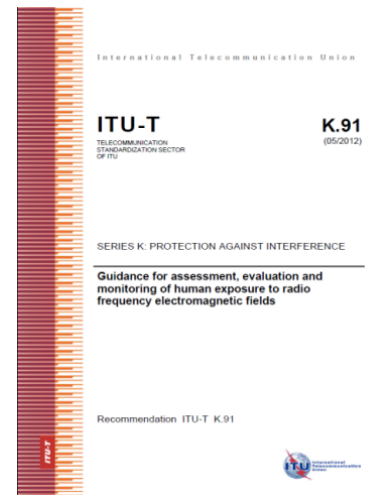
- Develop Recommendations for the telecommunication sector;
- Work on activities specified in Resolutions;
- Collaboration with other standardization bodies (IEC, CENELEC, WHO) in order to avoid duplication of work;
- Maintenance and enhancement of the existing Recommendations.

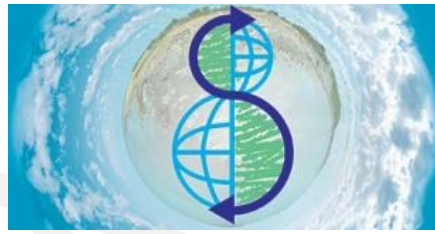


Question 7/5 (cont'd)

Examples of deliverables:

- ITU-T K.91 Guidance for assessment, evaluation and monitoring of the human exposure to radio frequency electromagnetic fields
- ITU-T K.83 Monitoring of the electromagnetic field levels
- ITU-T K.70 Mitigation techniques to limit human exposure to EMF's within vicinity of radiocommunication stations
- ITU-T K.52 Guidance on complying with limits for human exposure to electromagnetic fields
- ITU-T K.61 Guidance to measurement and numerical prediction of electromagnetic fields for compliance with human exposure limits for telecommunication installation
- Handbook on human exposure to EMF





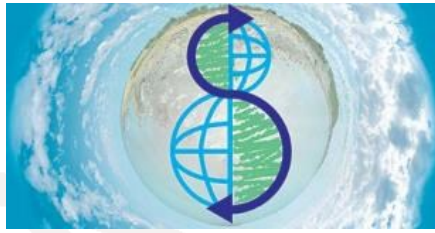
Turin Call to Action

ITU Workshop on Human Exposure to Electromagnetic Fields (9 May 2013)

- Outcome document: Turin Call to Action
- Compliance with harmonized EMF Standards and addressing public concern regarding human exposure to electromagnetic fields (EMF) and possible health effects

“The rational solution to citizens’ concerns regarding exposure to EMFs is to ensure that the actions of national regulators and network operators are accompanied to the greatest possible extent by transparency and communication with citizens. Compliance with international standards and associated reporting mechanisms assures citizens that regulators and network operators have complied with international best practices in deploying base stations, thereby safeguarding citizens’ health.”

Malcolm Johnson, ITU/TSB Director



Turin Call to Action:

1. **Shape the global agenda**
2. **Lead with vision**
3. **Standardize**
4. **Provide education and information**
5. **Share knowledge and raise awareness**
6. **Boost partnerships**
7. **Support clarification of the science**
8. **Demonstrate success and feasibility**
9. **Mobilize expertise**
10. **Annual forum and review**

Call on ITU-T SG5 to:

- lead cooperation among standards development organizations (SDOs) in the interests of harmonized international EMF standards;
- extend its work on human exposure to EMFs by developing and promoting EMF information and education resources accessible to all communities;
- establish specialised EMF assessment and accreditation training programs for developing countries;
- promote open online compliance and reporting systems as well as the development of a standardized online system to demonstrate compliance with international EMF standards.

Links & Additional Information

- ITU-T/SG5 “Environment & Climate Change”
<http://www.itu.int/ITU-T/studygroups/com05/index.asp>
- ITU-T/SG5 Series K Recommendations (free of charge)
http://www.itu.int/ITU-T/recommendations/index_sg.aspx?sg=5
- ITU-T and EMF
<http://www.itu.int/ITU-T/emf>

Thank YOU



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